Energy Facts

"A climate disrupted by human activities poses such sweeping threats to our national parks…that it dwarfs all previous risks to these American treasures." –NRDC, Losing Ground: Western National Parks Endangered by Climate Disruption (2006).

Solar Energy in the California Deserts

California has some of the world's best solar resources, many of which are located on federal public lands in the California deserts. These resources are critical to meeting California's future energy needs and aggressive climate commitments. As of November 2007, approximately 34 large solar thermal plants, totaling 24,000 MW and encompassing more than 300,000 acres were proposed on federal lands in the desert.[1] Determining which of these projects can and should be developed is a major challenge facing the state, the environmental community and other stakeholders.

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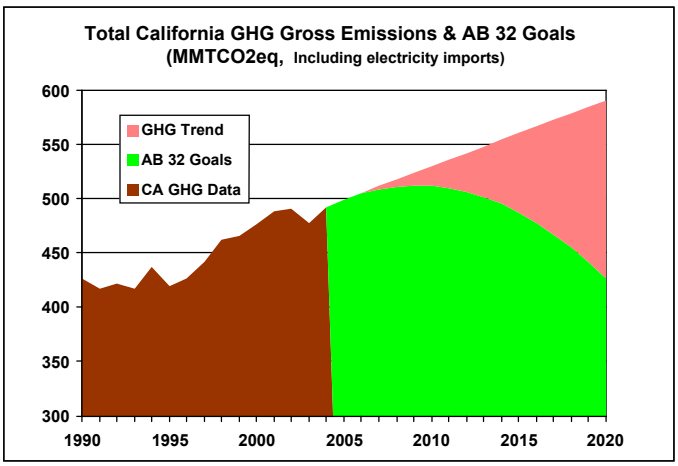

California is already experiencing climate change and will be impacted significantly by future warming.
Many of California's ecosystems, from the redwood forests to the Mojave Desert, are highly sensitive to climate changes and have already experienced impacts. For example, one study linked a changing climate to the extinction of about 30 of 80 populations of desert bighorn sheep in the past 60 years.[2] Remaining populations are now at risk of extinction especially in lower elevation mountains if temperatures increase 3.6 °F and precipitation decreases 12%. The impacts of climate change will be widespread and will not be limited to just a few species. In fact, experts believe that one-third of the land area of the 11 western states could experience changes in their dominant types of vegetation by 2100, with effects cascading to animal populations.[3]

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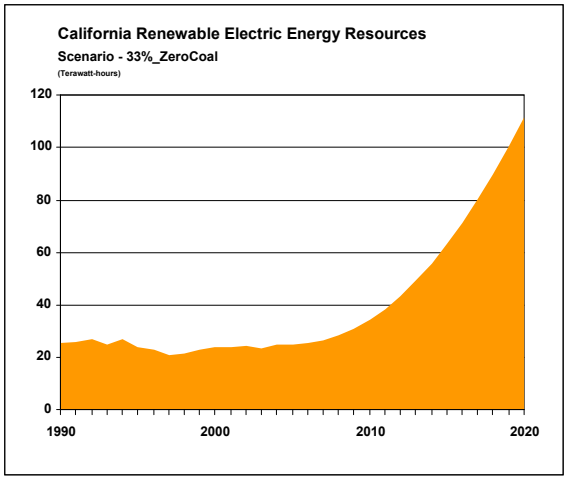
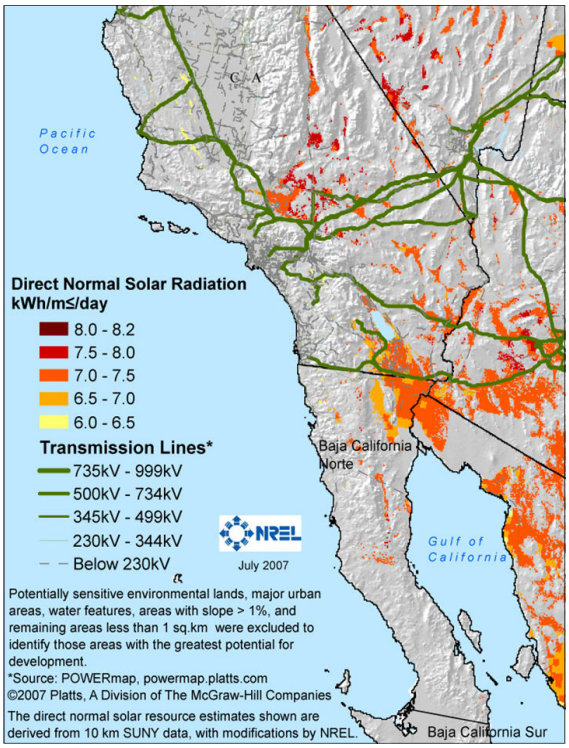
Solar Energy in the California Deserts

California has made significant climate change commitments.
California, a leader on many environmental fronts, has enacted landmark legislation to reduce CO_2 emissions to 80% below 1990 levels by 2050. In addition, California's Renewable Portfolio Standard requires 20% of its electricity to come from renewable sources by 2010 with the possibility of 33% by 2020. These commitments will not only reduce the threat of climate change, but will also decrease air pollution and benefit public health.



California's population and electricity needs are growing; renewable energy projects have the potential to limit or negate the need for new coal and nuclear projects.
Between 2000 and 2007, some170 new coal plants were planned in the U.S. By the end of 2007, at least 17 were under construction, and 62 were cancelled or put on hold.[4] About 100 nuclear plants are approaching or have exceeded their age limits. To meet its climate goals and energy requirements, California must aggressively pursue energy efficiency and increase its renewable energy resources significantly. All available, low carbon, <u>properly sited</u> energy solutions must be pursued: wind, distributed solar, utility-scale solar, biofuels, and geothermal.



The California deserts are home to significant solar and other renewable resources. California has the opportunity to utilize these resources to decrease the threat of climate change, but it must also assure protection of the desert's unique and sensitive natural and other resources. Proactive public engagement is essential to help California achieve both of these goals simultaneously.

[1]California Energy Commission, "Large Solar Energy Projects", last updated 11/07. Available at: http://www.energy.ca.gov/siting/solar/index.html
[2]Epps et al, "Effects of Climate Change on Population Persistence of Desert-Dwelling Mountain Sheep in California."
[3]Conservation Biology, Volume 18, No 1, February 2004. News summary available at: http://www.berkeley.edu/news/media/releases/2004/02/10_sheep.shtml
[4]NRDC et al "Losing Ground: Western National Parks Endangered by Climate Disruption." July, 2006. Available at: http://www.nrdc.org/land/parks/gw/contents.asp

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